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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,084	03/19/2004	Walter J. Smith	1370.002A	7707

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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,084

Applicant(s)

SMITH, WALTER J.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) 1-72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 73-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group III, species C (claims 73 and 76-78) in the reply filed on 10-13-05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 73 and 77-81 are rejected under 35 U.S.C. 102(b or e) as anticipated by Tanahashi et al (US 2004/0234428 A1) (102 (e)) for reasons of record set forth in a prior office action dated 06-15-05 in numbered paragraph 10 and for reasons set forth hereinafter.

With respect to newly added claims 79-81, as noted in a prior office action, in view that, both the present invention and Tanahashi et al use a ceramic material to form a star-shaped fiber, the star-shaped ceramic fiber of Tanahashi et al is

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reasonably taken to be inherently "*capable of sustaining temperatures of at least a minimum temperature for at least about 20,000 hours (claim 79), 30,000 hours (claim 80), and 40,000 hours (claim 81) wherein the minimum operating temperature is "400 °C".*

Note: MPEP 2133.01 states that "When applicant files a continuation-in part whose claims are not supported by the parent application, the effective filing date is the child CIP. Any prior art disclosing the invention or an obvious variant thereof having a critical reference date more than 1 year prior to the filing date of the child will bar the issuance of a patent under 35 U.S.C. 102(b). Paperless Accounting v. Bay Area Rapid Transit System, 804 F2d 659, 665, 231 USPQ 649, 653 (Fed. Cir. 1986)." (Emphasis added).

4. Claims 73 and 77-81 are rejected under 35 U.S.C. 102(b) as anticipated by Dobo et al (US 4,175,153) for reasons of record set forth in a prior office action dated 06-15-05 in numbered paragraph 10 and for reasons set forth hereinafter.

With respect to newly added claims 79-81, as noted in a prior office action, in view that, both the present invention and Dobo et al use a ceramic material to form a star-shaped fiber, the star-shaped ceramic fiber of Dobo et al is reasonably taken to be inherently "*capable of sustaining temperatures of at least a minimum temperature for at least about 20,000 hours (claim 79), 30,000 hours (claim 80), and 30,000 hours (claim 81) wherein the minimum operating temperature is "400 °C".*

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 76 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanahashi et al (US 2004/0234428 A1) (102 (e)) for reasons of record set forth in a prior office action dated 06-15-05 in numbered paragraph 13, and further in view of anyone of JP 2000045174 A, JP 352148219 A and JP 60162868 A.

As noted in the prior office action, it is old in the art to form star-shaped fibers with arcuate pointed portions as evidence from anyone of JP '174 A (figures 1c-1e), JP '219 A (figures 2a-2b) and JP '868 A (figures 1-2).

Response to Arguments

7. Applicant's arguments filed on 10-13-05 have been fully considered but they are not persuasive.

On page 12 Counsel argues that "(JP 2002-34870) does not appear to match U.S. Patent Application Publication cited". Counsel is correct. Examiner inadvertently left out number 4 between 7 and 0. The Japanese publication should have been written as --JP 2002-348740--. In any event, in order to simplify the issue, this Japanese reference is being withdrawn.

On page 12 full paragraphs 2-3, Counsel argues that, "*Thus, for the sake of argument, there is at best the mere suggestion of a star-shaped ceramic fiber made from the star-shaped nozzle. The parent application to the present application contained the basic disclosure of a star-shaped flexible filament for a turbine brush seal. Thus, since the present case is a CIP, it is entitled to the filing date [10-25-01] of the parent for any common subject matter.*" (words inserted).

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Examiner strongly disagrees. Since the presently recited claims are NOT fully supported in parent application 09/999,664, applicant is not entitled to the filing date of application '664. As noted above and in a prior office action, *"When applicant files a continuation-in part whose claims are not supported by the parent application, the effective filing date is the child CIP. Any prior art disclosing the invention or an obvious variant thereof having a critical reference date more than 1 year prior to the filing date of the child will bar the issuance of a patent under 35 U.S.C. 102(b). Paperless Accounting v. Bay Area Rapid Transit System, 804 F2d 659, 665, 231 USPQ 649, 653 (Fed. Cir. 1986)."* (Emphasis added). In the present case, there is no sufficient support in parent application '664 of (for example) a 3-pointed or 4-pointed star-shaped filament which is *"capable of sustaining temperatures of at least a minimum temperature for at least about 10,1000 hours, 20,000 hours (claim 79), 30,000 hours (claim 80), and 40,000 hours (claim 81) wherein the minimum operating temperature is "400 °C".* Note that, this claim is not limited to filaments which are made from a ceramic or a particular metallic alloy material. For this reason, the effective filing date of this application is 03-19-04.

On page 12 last three lines to page 13 line 10, Counsel further argues that, an automobile is generally used for only a few hours a day, and on that time basis, Counsel argues that an operating life of a catalytic converter of 10,000 hours would be equivalent of 9 yrs. First of all, even for the sake of argument Counsel is correct, it does not mean that the ceramic fibers in the converter have

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degraded, when a catalytic converter has failed. More important, Counsel is completely ignoring that fact that a star-shaped ceramic fiber taught by Tanahashi et al is indistinguishable from a star-shaped fiber which is also made out of a ceramic material. See applicant's specification on numbered paragraph 27. If applicant's ceramic star-shaped fibers are capable of sustaining at the recited operating conditions for at least 10,000 hrs, why wouldn't/shouldn't the star-shaped ceramic fibers of Tanahashi et al be expected to have the same characteristics as Applicant's star-shaped ceramic fibers?

Note: Where ... the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. **Whether the rejection is based on "inherency" under 35 USC § 102, on prima facie obviousness" under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products."** In re Best, 562 F2d 1252, 1255, 195 USPQ 430, 433-4 (CCPA 1977).

On page 13, Counsel argues that *"the technology therein is thus about 25 years old. ... modern fuel cell development cannot even achieve 10,000 hour longevity without clogging, much less technology from 25 years ago"*. It is respectfully submitted that, Counsel is confusing the issue. The issue here is **not** whether ceramic or metallic alloy star-shaped fibers of Dobo et al is capable of sustaining about at least 10,000 hrs when they are applied in a fuel cell, but rather whether or not ceramic or metallic alloy star-shaped fibers of Dobo et al are *"capable of sustaining temperatures of at least a minimum temperature for at least about*

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20,000 hours (claim 79), 30,000 hours (claim 80), and 40,000 hours (claim 81) wherein the minimum operating temperature is "400 °C", when they are applied for a turbine brush seal. Since the material (i.e. ceramic) used to make star-shaped fibers of Dobo et al is indistinguishable from the star-shaped fibers of the present invention, it would be reasonable to expect that the fibers of Dobo et al would have similar, if not identical, characteristics as applicant's star-shaped fibers.

As repeatedly noted above, Where ... the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. **Whether the rejection is based on "inherency" under 35 USC § 102, on prima facie obviousness" under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products."** In re Best, 562 F2d 1252, 1255, 195 USPQ 430, 433-4 (CCPA 1977).

On page 14, Counsel argues that *"Applicant does not acquiesce to the allegation that "... a star-shaped fiber having arcuate pointed portions is old in the art. Nothing presented in the Office Action provides proof of this allegation."* As proofs to examiner's assertion, Counsel's attention to the following Japanese patents: JP '174 A (figures 1c-1e), JP '219 A (figures 2a-2b) and JP '868 A (figures 1-2). As noted in the prior office action, Tanahashi et al is open to using fibers with any desired cross-sectional configuration. For this reason, the limitation in this claim would have been obvious in the art.

Conclusion


8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sam Chuan C. Yao
Primary Examiner
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